

 **PALM INTRANET**

Day : Tuesday
Date: 7/6/2004
Time: 09:10:25

Inventor Name Search

Enter the **first few letters** of the Inventor's Last Name.
Additionally, enter the **first few letters** of the Inventor's First name.

Last Name**First Name**

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | Home page

Refine Search

Search Results -

Term	Documents
(13 NOT 5).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	48
(L13 NOT L5).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	48

Database:

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 JPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

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DATE: Tuesday, July 06, 2004 [Printable Copy](#) [Create Case](#)

<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
side by side			
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=AND</i>			
<u>L14</u>	L13 not L5	48	<u>L14</u>
<u>L13</u>	L12 and ((DNA adj vaccine) or (genetic adj immunization))	50	<u>L13</u>
<u>L12</u>	L11 and (DNA or plasmid or vector)	889	<u>L12</u>
<u>L11</u>	(conjugation or conjugate) same ((antibody or Ab) and (polycationic or polyethylenimine or polyimine or polylysine or PEI))	1021	<u>L11</u>
<u>L10</u>	(Ab-PEI-DNA)	0	<u>L10</u>
<u>L9</u>	L7 and L3	1	<u>L9</u>
<u>L8</u>	L7 and L2	6	<u>L8</u>
<u>L7</u>	(Expression adj library) adj immunization	68	<u>L7</u>
<u>L6</u>	L5 and ((DNA adj vaccine) or (genetic adj immunization))	4	<u>L6</u>
<u>L5</u>	L2 and L3	43	<u>L5</u>

<u>L4</u>	L2 same L3	2	<u>L4</u>
<u>L3</u>	(polycationic or polyethylenimine or polyimine or polylysine) same (conjugate)	1352	<u>L3</u>
<u>L2</u>	(aggregated or macroaggregated) same (protein or albumin or antibody)	5088	<u>L2</u>
<u>L1</u>	Orson-Frank-M\$.in.	1	<u>L1</u>

END OF SEARCH HISTORY

Welcome to DialogClassic Web(tm)

Dialog level 04.11.00D
Last logoff: 01jul04 16:26:33
Logon file001 06jul04 11:25:52

*** ANNOUNCEMENT ***

--File 654 - US published applications from March 15, 2001 to the present are now online. Please see HELP NEWS 654 for details.

--File 581 - The 2003 annual reload of Population Demographics is complete. Please see Help News581 for details.

--File 990 - NewsRoom now contains February 2004 to current records.
File 992 - NewsRoom 2003 archive has been newly created and contains records from January 2003. The oldest months's records roll out of File 990 and into File 992 on the first weekend of each month.
To search all 2003 records BEGIN 990, 992, or B NEWS2003, a new OneSearch category.

--Connect Time joins DialUnits as pricing options on Dialog.
See HELP CONNECT for information.

*** --SourceOne patents are now delivered to your email inbox as PDF replacing TIFF delivery. See HELP SOURCE1 for more information.

--Important Notice to Freelance Authors--
See HELP FREELANCE for more information

NEW FILES RELEASED

***MetalBase (File 36)
***AeroBase (File 104)
***DIOGENES: Adverse Drug Events Database (File 181)
***World News Connection (File 985)
***Dialog NewsRoom - 2003 Archive (File 992)
***TRADEMARKSCAN-Czech Republic (File 680)
***TRADEMARKSCAN-Hungary (File 681)
***TRADEMARKSCAN-Poland (File 682)

UPDATING RESUMED

RELOADED

***Toxfile (File 156)
***Medline (Files 154-155)
***Population Demographics -(File 581)
***CLAIMS Citation (Files 220-222)

REMOVED

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
>>> of new databases, price changes, etc. <<<

KWIC is set to 50.
HILIGHT set on as ' '

* * * *

File 1:ERIC 1966-2004/Jun 09
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Set	Items	Description
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Cost is in DialUnits

?

B 155, 159, 5, 73

06jul04 11:26:41 User259876 Session D646.1

\$0.62 0.178 DialUnits File1

\$0.62 Estimated cost File1

\$0.20 INTERNET

\$0.82 Estimated cost this search

\$0.82 Estimated total session cost 0.178 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 155:MEDLINE(R) 1966-2004/Jun W2

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***File 155: Medline has been reloaded. Accession numbers**
have changed. Please see HELP NEWS 154 for details.

File 159:Cancerlit 1975-2002/Oct

(c) format only 2002 Dialog Corporation

***File 159: Cancerlit ceases updating with immediate effect.**
Please see HELP NEWS.

File 5:Biosis Previews(R) 1969-2004/Jun W4

(c) 2004 BIOSIS

File 73:EMBASE 1974-2004/Jun W4

(c) 2004 Elsevier Science B.V.

Set Items Description

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?

S (AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)

37412 AGGREGATED

1642 MACROAGGREGATED

4188970 PROTEIN

1308420 ANTIBODY

310868 LIGAND

279985 ALBUMIN

S1 15417 (AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY
OR LIGAND OR ALBUMIN)

?

S S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION))

15417 S1

2574560 DNA

284815 VECTOR

2492137 GENE

1577250 GENETIC

202627 IMMUNIZATION

952 GENETIC(W) IMMUNIZATION

S2 1278 S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W)
IMMUNIZATION))

?

S S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHELENIMINE OR POLYIMMINE OR PEI)

1278 S2

2730 POLYCATIONIC

10182 POLYLYSINE

1 POLYETHELENIMINE

0 POLYIMMINE

3958 PEI

S3 7 S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHELENIMINE OR
POLYIMMINE OR PEI)

?

RD

...completed examining records

S4 3 RD (unique items)

?

T S4/3,K/ALL

4/3,K/1 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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12190474 PMID: 12526712

Novel shielded transferrin-polyethylene glycol-polyethylenimine/DNA complexes for systemic tumor-targeted gene transfer.

Kursa Malgorzata; Walker Greg F; Roessler Vanessa; Ogris Manfred; Roedel Wolfgang; Kircheis Ralf; Wagner Ernst

Pharmaceutical Biology-Biotechnology, Department for Pharmacy, Ludwig-Maximilians-Universitaet, Butenandtstrasse 5-13, D-81377 Muenchen, Germany.

Bioconjugate chemistry (United States) Jan-Feb 2003, 14 (1) p222-31, ISSN 1043-1802 Journal Code: 9010319

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Tumor-targeting **DNA** complexes which can readily be generated by the mixing of stable components and freeze-thawed would be very advantageous for their subsequent application as medical products. Complexes were generated by the mixing of plasmid **DNA**, linear polyethylenimine (PEI22, 22 kDa) as the main **DNA** condensing agent, PEG- **PEI** (poly(ethylene glycol)-conjugated **PEI**) for surface shielding, and Tf-PEG- **PEI** (transferrin-PEG- **PEI**) to provide a **ligand** for receptor-mediated cell uptake. Within the shielding conjugates, PEG chains of varying size (5, 20, or 40 kDa) were conjugated with either linear PEI22 (22 kDa) or branched PEI25 (25 kDa). The three polymer components were mixed together at various ratios with **DNA**; particle size, surface charge, in vitro transfection activity, and systemic **gene** delivery to tumors was investigated. In general, increasing the proportion of shielding conjugate in the complex reduced surface charge, particle size, and in vitro transfection efficiency in transferrin receptor-rich K562 cells. The particle size or surface charge of the complexes containing the PEG- **PEI** conjugate did not significantly change after freeze-thawing, while complexes without the shielding conjugate **aggregated**. Complexes containing PEG- **PEI** conjugate efficiently transfected K562 cells after freeze-thawing. Furthermore the systemic application of freeze-thawed complexes exhibited in vivo tumor targeted expression. For complexes containing the luciferase reporter **gene** the highest expression was found in tumor tissue of mice. An optimum formulation for in vivo application, PEI22/Tf-PEG- **PEI** /PEI22-PEG5, containing plasmid **DNA** encoding for the tumor necrosis factor (TNF-alpha), inhibited tumor growth in three different murine tumor models. These new **DNA** complexes offer simplicity and convenience, with tumor targeting activity in vivo after freeze-thawing.

4/3,K/2 (Item 2 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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11586546 PMID: 11741272

DNA/polyethylenimine transfection particles: influence of ligands, polymer size, and PEGylation on internalization and gene expression.

Ogris M; Steinlein P; Carotta S; Brunner S; Wagner E

Institute of Biochemistry, University of Vienna, Vienna, Austria. manfred.ogris@cup.uni-muenchen.de

AAPS pharmSci electronic resource (United States) 2001, 3 (3) pE21, ISSN 1522-1059 Journal Code: 100897065

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Receptor-binding ligands have been incorporated into **DNA**

/polyethylenimine (**PEI**) complexes to enhance cell binding and cellular internalization. This study characterizes receptor-mediated uptake of **DNA** / **PEI** complexes on a cellular basis. A novel assay based on flow cytometry was applied, discriminating between total cell-associated and extracellularly bound **DNA** complexes. Receptor-mediated uptake of **ligand** -containing **DNA** / **PEI** (molecular weight, 800 kd) complexes was found to occur quickly (within 1 hour), whereas unspecific uptake through adsorptive endocytosis is less efficient or requires extended periods to reach the same degree of internalization. Rapid, receptor-mediated internalization requires a small complex size; however, large, **aggregated** complexes show higher **gene** expression. Using **PEI** 25 kd conjugated to large proteins such as transferrin or antibodies, improper condensation with **DNA** leads to suboptimal uptake and **gene** expression, whereas partial replacement of **ligand** - **PEI** with unconjugated **PEI** increases both uptake and transfection. In contrast, the 8 kd **protein** epidermal growth factor conjugated to **PEI** 25 kd properly condenses **DNA** and mediates specific uptake into human adenocarcinoma (KB) cells. Modification of the complex surface with appropriate amounts of poly(ethylene glycol) (PEG) does not block **ligand** -mediated internalization. A higher degree of PEGylation reduces the internalization of transferrin or **antibody** -containing complexes to a level similar to that of **ligand** -free complexes. In contrast, epidermal growth factor mediated uptake is less effected by excessive PEGylation.

4/3,K/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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11347280 PMID: 11437332

A small, synthetic peptide for gene delivery via the serpin-enzyme complex receptor.

Patel S; Zhang X; Collins L; Fabre J W

Department of Clinical Sciences, Guy's, King's and St Thomas' School of Medicine, King's College Hospital, London, UK.

journal of gene medicine (England) May-Jun 2001, 3 (3) p271-9,

ISSN 1099-498X Journal Code: 9815764

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

BACKGROUND: The serpin-enzyme complex receptor (SECR) has previously been successfully targeted for **gene** delivery using synthetic peptide ligands covalently linked in fluid phase to commercially available **polylysine** preparations (approximately 10-54kDa). The objective of the present study was to improve this approach by the use of small, bifunctional, and easily standardised synthetic peptides. **METHODS:** Two synthetic peptides designated **polylysine** antitrypsin 1 (PAT1) (K16 FNKPFVFLI) and PAT2 (K16 CSIPPEVKFNKPFVFLI) were evaluated for **gene** delivery to the HUH7 human hepatocyte cell line. The K16 moiety binds **DNA** electrostatically, while the FVFLM motif of human alpha1-antitrypsin targets the SECR. **RESULTS:** Both PAT1 and PAT2 bind to and condense **DNA** into small particles as shown by laser scattering techniques. However, only PAT2 is effective for **gene** delivery, presumably on account of the greater distance between the K16 chain and the FVFLM motif. **Gene** delivery by PAT2/ **DNA** complexes is chloroquine-dependent, can be blocked completely by free **ligand** (CSIPPEVKFNKPFVFLI), and is highly efficient (e.g. approximately five-fold more effective than lipofectamine). At physiological salt concentrations, PAT2/ **DNA** complexes formed at 4 microg/ml **DNA** are approximately 350 nm in diameter and highly effective for **gene** transfer, but at 100 microg/ml **DNA** the complexes are **aggregated** (diameter > 4 microm) and inactive. **CONCLUSIONS:** A small (33 amino acid), bifunctional, synthetic peptide represents a highly efficient and readily standardised **DNA** vector for

the SECR. The effectiveness of this peptide depends on the distance of the K16 moiety from the targeting **ligand** . High salt concentrations are not required to form effective **vector DNA** complexes.

?

Set	Items	Description
S1	15417	(AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
S2	1278	S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION-))
S3	7	S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHELENEIMINE OR - POLYIMMINE OR PEI)
S4	3	RD (unique items)
?		
S	S2 AND	(POLYCATIONIC OR POLYLYSINE OR POLYETHELENEIMINE OR POLYIMMINE OR PEI)
	1278	S2
	2730	POLYCATIONIC
	10182	POLYLYSINE
	3	POLYETHELENEIMINE
	0	POLYIMMINE
	3958	PEI
S5	11	S2 AND (POLYCATIONIC OR POLYLYSINE OR POLYETHELENEIMINE OR POLYIMMINE OR PEI)

?

RD S5

...completed examining records

S6	5	RD S5 (unique items)
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?

S S6 NOT S3

	5	S6
	7	S3
S7	2	S6 NOT S3

?

T S7/3,K/ALL

7/3,K/1 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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12372498 PMID: 12749911

The phosphocholine and the polycation-binding sites on rabbit C-reactive protein are structurally and functionally distinct.

Black Steven; Agrawal Alok; Samols David

Department of Biochemistry, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106, USA.

Molecular immunology (England) Jun 2003, 39 (16) p1045-54, ISSN 0161-5890 Journal Code: 7905289

Contract/Grant No.: AG02467; AG; NIA; AR40765; AR; NIAMS; DK07319; DK; NIDDK

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

C-reactive **protein** (CRP) is an acute phase **protein** in humans and rabbits that has the ability to bind a number of biologically important ligands including phosphocholine (PCh), histones, and polycations. In addition to this recognition function, **ligand** -complexed or **aggregated** CRP is capable of activating the classical complement pathway. We have generated two strains of transgenic mice in order to study CRP-binding to PCh and consequent complement activation. Based on crystallographic and mutagenesis studies in human CRP (huCRP), we mutated Phe66 and Glu81 in the rabbit CRP (rbCRP) **gene** and generated a strain of transgenic mice (F66Y/E81K), which expressed this variant form of rbCRP. We also mutated Tyr175 in rbCRP to generate transgenic...

... rbCRP are distinct but possibly overlapping. The conformational changes in the C1q-binding site of CRP to activate complement depend on the nature of the **ligand** and on the location of the **ligand** -binding site.

Descriptors: C-Reactive Protein--chemistry--CH; *C-Reactive Protein--metabolism--ME; *Complement Pathway, Classical; *Phosphorylcholine--metabolism--ME; **Polylysine** --metabolism--ME

Chemical Name: Cations; Histones; Polyamines; Polysaccharides, Bacterial; Serum Albumin, Bovine; polycations; polysaccharide C-substance (Streptococcus); Phosphorylcholine; **Polylysine** ; Lysine; Complement 1q; C-Reactive Protein

7/3,K/2 (Item 2 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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10029483 PMID: 8146151

Utilization of modified surfactant-associated protein B for delivery of DNA to airway cells in culture.

Baatz J E; Bruno M D; Ciruolo P J; Glasser S W; Stripp B R; Smyth K L; Korfhagen T R

Department of Pediatrics, Medical University of South Carolina, Charleston 29425-3313.

Proceedings of the National Academy of Sciences of the United States of America (UNITED STATES) Mar 29 1994, 91 (7) p2547-51, ISSN 0027-8424
Journal Code: 7505876

Contract/Grant No.: 45961; PHS

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

... lines the airway epithelium and creates a potential barrier to successful transfection of the epithelium in vivo. Based on the functional properties of pulmonary surfactant **protein B** (SP-B) and the fact that this **protein** is neither toxic nor immunogenic in the airway, we hypothesized that SP-B could be modified to deliver **DNA** to airway cells. We have modified native bovine SP-B by the covalent linkage of poly(lysine) (average molecular mass of 3.3 or 10...

... was determined by transfection of pulmonary adenocarcinoma cells (H441) in culture with the test plasmid pCPA-RSV followed by measurement of activity of the reporter **gene** encoding chloramphenicol acetyltransferase (CAT). Transfections were performed with **DNA** . **protein** complexes using poly(lysine)10kDa-SP-B ([Lys]10kDa-SP-B) or poly(lysine)3.3kDa-SP-B ([Lys]3.3kDa-SP-B), and results were compared with transfections using unmodified poly(lysine). **DNA** , unmodified SP-B. **DNA** , or □DNA□only. For [Lys]10kDa-SP-B.pCPA-RSV preparations, CAT activity was readily detectable above the background of [Lys]3.3kDa-SP-B or unmodified SP-B. The SP-B-poly(lysine) conjugates were effective over a broad range of **protein** -to- **DNA** molar ratios, although they were optimal at approximately 500:1-1000:1. Transfection efficiency varied with the tested cell line but was not specific to...

... spectrometry (FTIR). Results of FTIR indicated that the conformation of [Lys]10kDa-SP-B was comprised primarily of alpha-helical structure compared with a predominantly **aggregated** structure of unmodified poly(lysine). We conclude that poly(lysine) conjugates of SP-B effectively deliver **DNA** in vitro and may have utility as **DNA** delivery vehicles to the airway in vivo.

Descriptors: DNA, Recombinant--pharmacology--PD; *Drug Carriers--pharmacology--PD; * **Polylysine** --pharmacology--PD; *Proteolipids--pharmacology--PD; *Pulmonary Surfactants--pharmacology--PD; *Transfection--methods--MT

Chemical Name: DNA, Recombinant; Drug Carriers; Phosphatidylethanolamines
; Proteolipids; Pulmonary Surfactants; **Polylysine** ;
1,2-dielaiddoylphosphatidylethanolamine; Chloramphenicol O-Acetyltransferase
?

Set	Items	Description
S1	15417	(AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
S2	1278	S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION-))
S3	7	S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHELENIMINE OR - POLYIMMINE OR PEI)
S4	3	RD (unique items)
S5	11	S2 AND (POLYCATIONIC OR POLYLYSINE OR POLYETHELENEIMINE OR POLYIMMINE OR PEI)
S6	5	RD S5 (unique items)
S7	2	S6 NOT S3
?		
S S1 (S)		(POLYCATIONIC OR POLYLYSINE OR POLYETHELENEIMINE OR POLYIMINES OR PEI)
	15417	S1
	2730	POLYCATIONIC
	10182	POLYLYSINE
	3	POLYETHELENEIMINE
	2	POLYIMINES
	3958	PEI
S8	36	S1 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHELENEIMINE OR POLYIMINES OR PEI)
?		
RD S8		
...completed examining records		
	S9	18 RD S8 (unique items)
?		
S S9 AND (DNA OR VECTOR OR GENE)		
	18	S9
	2574560	DNA
	284815	VECTOR
	2492137	GENE
S10	3	S9 AND (DNA OR VECTOR OR GENE)
?		
T S10/3,K/ALL		

10/3,K/1 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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12190474 PMID: 12526712

Novel shielded transferrin-polyethylene glycol-polyethylenimine/ DNA complexes for systemic tumor-targeted gene transfer.

Kursa Malgorzata; Walker Greg F; Roessler Vanessa; Ogris Manfred; Roedl Wolfgang; Kircheis Ralf; Wagner Ernst
Pharmaceutical Biology-Biotechnology, Department for Pharmacy,
Ludwig-Maximilians-Universitaet, Butenandtstrasse 5-13, D-81377 Muenchen, Germany.

Bioconjugate chemistry (United States) Jan-Feb 2003, 14 (1) p222-31,
ISSN 1043-1802 Journal Code: 9010319
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Novel shielded transferrin-polyethylene glycol-polyethylenimine/ DNA complexes for systemic tumor-targeted gene transfer.

Tumor-targeting DNA complexes which can readily be generated by the mixing of stable components and freeze-thawed would be very advantageous

for their subsequent application as medical products. Complexes were generated by the mixing of plasmid **DNA**, linear polyethylenimine (PEI22, 22 kDa) as the main **DNA** condensing agent, PEG- **PEI** (poly(ethylene glycol)-conjugated **PEI**) for surface shielding, and Tf-PEG- **PEI** (transferrin-PEG- **PEI**) to provide a **ligand** for receptor-mediated cell uptake. Within the shielding conjugates, PEG chains of varying size (5, 20, or 40 kDa) were conjugated with either linear PEI22 (22 kDa) or branched PEI25 (25 kDa). The three polymer components were mixed together at various ratios with **DNA**; particle size, surface charge, in vitro transfection activity, and systemic **gene** delivery to tumors was investigated. In general, increasing the proportion of shielding conjugate in the complex reduced surface charge, particle size, and in vitro transfection efficiency in transferrin receptor-rich K562 cells. The particle size or surface charge of the complexes containing the PEG- **PEI** conjugate did not significantly change after freeze-thawing, while complexes without the shielding conjugate **aggregated**. Complexes containing PEG- **PEI** conjugate efficiently transfected K562 cells after freeze-thawing. Furthermore the systemic application of freeze-thawed complexes exhibited in vivo tumor targeted expression. For complexes containing the luciferase reporter **gene** the highest expression was found in tumor tissue of mice. An optimum formulation for in vivo application, PEI22/Tf-PEG- **PEI** /PEI22-PEG5, containing plasmid **DNA** encoding for the tumor necrosis factor (TNF-alpha), inhibited tumor growth in three different murine tumor models. These new **DNA** complexes offer simplicity and convenience, with tumor targeting activity in vivo after freeze-thawing.

Descriptors: **DNA** --administration and dosage--AD; *Drug Carriers --chemistry--CH; * **Gene** Therapy; *Neoplasms, Experimental--therapy--TH; Animals; **DNA** --therapeutic use--TU; K562 Cells; Mice; Mice, Inbred Strains; Molecular Weight; Polyethylene Glycols--chemistry--CH; Polyethyleneimine --chemistry--CH; Transfection; Transferrin--chemistry--CH; Treatment Outcome; Tumor...

Chemical Name: Drug Carriers; Polyethylene Glycols; Tumor Necrosis Factor; Transferrin; Polyethyleneimine; **DNA**

10/3,K/2 (Item 2 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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11586546 PMID: 11741272

DNA /polyethylenimine transfection particles: influence of ligands, polymer size, and PEGylation on internalization and gene expression.

Ogris M; Steinlein P; Carotta S; Brunner S; Wagner E

Institute of Biochemistry, University of Vienna, Vienna, Austria.
manfred.ogris@cup.uni-muenchen.de

AAPS pharmSci electronic resource (United States) 2001, 3 (3) pE21,
ISSN 1522-1059 Journal Code: 100897065

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

DNA /polyethylenimine transfection particles: influence of ligands, polymer size, and PEGylation on internalization and gene expression.

Receptor-binding ligands have been incorporated into **DNA** /polyethylenimine (**PEI**) complexes to enhance cell binding and cellular internalization. This study characterizes receptor-mediated uptake of **DNA** / **PEI** complexes on a cellular basis. A novel assay based on flow cytometry was applied, discriminating between total cell-associated and extracellularly bound **DNA** complexes. Receptor-mediated uptake of **ligand** -containing **DNA** / **PEI** (molecular weight, 800 kd) complexes was found to occur quickly (within 1 hour), whereas unspecific uptake through adsorptive endocytosis is less efficient or requires extended periods to reach the same degree of internalization. Rapid, receptor-mediated internalization

requires a small complex size; however, large, **aggregated** complexes show higher **gene** expression. Using **PEI** 25 kd conjugated to large proteins such as transferrin or antibodies, improper condensation with **DNA** leads to suboptimal uptake and **gene** expression, whereas partial replacement of **ligand** - **PEI** with unconjugated \square PEI \square increases both uptake and transfection. In contrast, the 8 kd **protein** epidermal growth factor conjugated to **PEI** 25 kd properly condenses **DNA** and mediates specific uptake into human adenocarcinoma (KB) cells. Modification of the complex surface with appropriate amounts of poly(ethylene glycol) (PEG) does not block **ligand** -mediated internalization. A higher degree of PEGylation reduces the internalization of transferrin or **antibody** -containing complexes to a level similar to that of **ligand** -free complexes. In contrast, epidermal growth factor "mediated uptake is less effected by excessive PEGylation.

Descriptors: **DNA** --chemistry--CH; * **Gene** Transfer Techniques; *Polyethylene Glycols--chemistry--CH; *Polyethyleneimine; **DNA** --metabolism--ME; Drug Carriers; Endocytosis; Epidermal Growth Factor--chemistry--CH; Flow Cytometry; Genes, Reporter; Jurkat Cells; KB Cells; Ligands; Luciferase--genetics--GE; Luciferase--metabolism--ME...

Chemical Name: Drug Carriers; Ligands; Muromonab-CD3; Plasmids; Polyethylene Glycols; Transferrin; Epidermal Growth Factor; Polyethyleneimine; **DNA** ; Luciferase

10/3,K/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2004 The Dialog Corp. All rts. reserv.

11347280 PMID: 11437332

A small, synthetic peptide for gene delivery via the serpin-enzyme complex receptor.

Patel S; Zhang X; Collins L; Fabre J W

Department of Clinical Sciences, Guy's, King's and St Thomas' School of Medicine, King's College Hospital, London, UK.

Journal of gene medicine (England) May-Jun 2001, 3 (3) p271-9,

ISSN 1099-498X Journal Code: 9815764

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

A small, synthetic peptide for gene delivery via the serpin-enzyme complex receptor.

BACKGROUND: The serpin-enzyme complex receptor (SECR) has previously been successfully targeted for **gene** delivery using synthetic peptide ligands covalently linked in fluid phase to commercially available **polylysine** preparations (approximately 10-54kDa). The objective of the present study was to improve this approach by the use of small, bifunctional, and easily standardised synthetic peptides. **METHODS:** Two synthetic peptides designated **polylysine** antitrypsin 1 (PAT1) (K16 FNKPFVFLI) and PAT2 (K16 CSIPPEVKFNKPFVFLI) were evaluated for **gene** delivery to the HUH7 human hepatocyte cell line. The K16 moiety binds **DNA** electrostatically, while the FVFLM motif of human alpha1-antitrypsin targets the SECR. **RESULTS:** Both PAT1 and PAT2 bind to and condense **DNA** into small particles as shown by laser scattering techniques. However, only PAT2 is effective for **gene** delivery, presumably on account of the greater distance between the K16 chain and the FVFLM motif. **Gene** delivery by PAT2/ **DNA** complexes is chloroquine-dependent, can be blocked completely by free **ligand** (CSIPPEVKFNKPFVFLI), and is highly efficient (e.g. approximately five-fold more effective than lipofectamine). At physiological salt concentrations, PAT2/ **DNA** complexes formed at 4 microg/ml **DNA** are approximately 350 nm in diameter and highly effective for **gene** transfer, but at 100 microg/ml **DNA** the complexes are **aggregated** (diameter > 4 microm) and inactive. **CONCLUSIONS:** A small (33 amino acid), bifunctional, synthetic peptide

represents a highly efficient and readily standardised **DNA vector** for the SECR. The effectiveness of this peptide depends on the distance of the K16 moiety from the targeting **ligand**. High salt concentrations are not required to form effective **vector DNA** complexes.

Descriptors: **Gene Transfer Techniques**; ***Receptors, Cell Surface**
--metabolism--ME

?

Set	Items	Description
S1	15417	(AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
S2	1278	S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION-))
S3	7	S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHELENIMINE OR - POLYIMMINE OR PEI)
S4	3	RD (unique items)
S5	11	S2 AND (POLYCATIONIC OR POLYLYSINE OR POLYETHELENEIMINE OR POLYIMMINE OR PEI)
S6	5	RD S5 (unique items)
S7	2	S6 NOT S3
S8	36	S1 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHELENEIMINE OR POLYIMINES OR PEI)
S9	18	RD S8 (unique items)
S10	3	S9 AND (DNA OR VECTOR OR GENE)

?

S (AB-PEI-DNA) OR (AB-PEI-VECTOR)	0	AB-PEI-DNA
	0	AB-PEI-VECTOR
S11	0	(AB-PEI-DNA) OR (AB-PEI-VECTOR)

?

S (EXPRESSION (W) LIBRARY (W) IMMUNIZATION)	2265064	EXPRESSION
	143284	LIBRARY
	202627	IMMUNIZATION
S12	71	(EXPRESSION (W) LIBRARY (W) IMMUNIZATION)

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S S12 AND S1	71	S12
	15417	S1
S13	0	S12 AND S1

?

S S12 AND REVIEW	71	S12
	1737797	REVIEW
S14	5	S12 AND REVIEW

?

RD	...	completed examining records
S15	4	RD (unique items)

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T S15/3,K/ALL

15/3,K/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0014924972 BIOSIS NO.: 200400295729

Expression library immunization to discover and improve vaccine antigens

AUTHOR: Barry Michael A (Reprint); Howell Dasein P G; Andersson Helen A;
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JOURNAL: Immunological Reviews 199 (1): p68-83 June 2004 2004

MEDIUM: print
 ISSN: 0105-2896
 DOCUMENT TYPE: Article; Literature Review
 RECORD TYPE: Citation
 LANGUAGE: English

Expression library immunization to discover and improve vaccine
antigens

DESCRIPTORS:

METHODS & EQUIPMENT: **expression library immunization** --
 MISCELLANEOUS TERMS: ...Literature Review

15/3,K/2 (Item 1 from file: 73)
 DIALOG(R)File 73:EMBASE
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12221990 EMBASE No: 2003331777

**Advances in the identification and characterization of protective
 antigens for recombinant vaccines against tick infestations**

De la Fuente J.; Kocan K.M.

J. De la Fuente, Dept. of Veterinary Pathobiology, College of Veterinary
 Medicine, Oklahoma State University, Stillwater, OK 74078 United States

AUTHOR EMAIL: jose delafuente@yahoo.com

Expert Review of Vaccines (EXPERT REV. VACCINES) (United Kingdom)

2003, 2/4 (583-593)

CODEN: ERVXA ISSN: 1476-0584

DOCUMENT TYPE: Journal ; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 77

...identified and characterized, discovery of new antigens remains the
 limiting step for improving the efficacy of tick vaccines. Recent
 technologies developed for gene discovery, including **expression library
 immunization** and evaluation of expressed sequence tags, show promise for
 rapid, systematic and global antigen screening and should provide a
 comprehensive approach to selection of candidate...

MEDICAL DESCRIPTORS:

drug synthesis; ectoparasite; mosquito; pathogenesis; infection control;
 drug determination; drug efficacy; treatment outcome; immunization; disease
 transmission; drug formulation; vaccination; human; clinical trial; **review**
 ; priority journal

15/3,K/3 (Item 2 from file: 73)
 DIALOG(R)File 73:EMBASE
 (c) 2004 Elsevier Science B.V. All rts. reserv.

12040256 EMBASE No: 2003151720

**Enhanced efficacy of DNA vaccines against an intracellular bacterial
 pathogen by genetic adjuvants**

Leclercq S.; Harms J.S.; Oliveira S.C.

S.C. Oliveira, Department of Biochem./Immunology, Federal University of
 Minas Gerais, Inst. for Investigation Immunology, Av Antonio Carlos 6627,
 Belo Horizonte-MG 30161-970 Brazil

AUTHOR EMAIL: scozeus@icb.ufmg.br

Current Pharmaceutical Biotechnology (CURR. PHARM. BIOTECHNOL.) (
 Netherlands) 2003, 4/2 (99-107)

CODEN: CPBUB ISSN: 1389-2010

DOCUMENT TYPE: Journal ; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 97

...immunogens. Secondly, we reported the use of cytokine genes and
 genetic adjuvants that could improve the immunogenicity of target genes.

And finally, we discussed the " **Expression Library Immunization** " - (ELI) strategy and the recent results obtained against *Brucella abortus* infection.

MEDICAL DESCRIPTORS:

...bacterial virulence; DNA hybridization; cytokine production; cytotoxic T lymphocyte; muscle necrosis; muscle regeneration; immunostimulation; antigen presenting cell; drug potentiation; gene construct; CpG island; nonhuman; mouse; **review**

15/3,K/4 (Item 3 from file: 73)

DIALOG(R)File 73:EMBASE

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07436928 EMBASE No: 1998327856

DNA vaccines

Lai W.C.; Bennett M.

Dr. W.C. Lai, Department of Pathology, Texas Univ. Southwestern Med. Ctr., 5323 Harry Hines Blvd., Dallas, TX 75235-9072 United States
Critical Reviews in Immunology (CRIT. REV. IMMUNOL.) (United States)
1998, 18/5 (449-484)

CODEN: CCRID ISSN: 1040-8401

DOCUMENT TYPE: Journal; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 235

...induction of injury to muscles prior to injection of DNA to enhance gene expression. Vaccination performed using DNA without knowing beforehand the protective epitopes, using ' **expression library immunization** ', is discussed. While this field is bound to expand rapidly for future clinical applications, we try to point out potential pitfalls as well as advantages

MEDICAL DESCRIPTORS:

protein expression; helper cell; aerosol; gene expression; dna library; antigen presenting cell; dendritic cell; immune response; drug effect; cloning vector; nonhuman; mouse; rat; animal cell; **review** ; priority journal
?

Set	Items	Description
S1	15417	(AGGREGATED OR MACROAGGREGATED) (S) (PROTEIN OR ANTIBODY OR LIGAND OR ALBUMIN)
S2	1278	S1 (S) (DNA OR VECTOR OR GENE OR (GENETIC (W) IMMUNIZATION-))
S3	7	S2 (S) (POLYCATIONIC OR POLYLYSINE OR POLYETHELENIMINE OR - POLYIMMINE OR PEI)
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S6	5	RD S5 (unique items)
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S9	18	RD S8 (unique items)
S10	3	S9 AND (DNA OR VECTOR OR GENE)
S11	0	(AB-PEI-DNA) OR (AB-PEI-VECTOR)
S12	71	(EXPRESSION (W) LIBRARY (W) IMMUNIZATION)
S13	0	S12 AND S1
S14	5	S12 AND REVIEW
S15	4	RD (unique items)

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COST

06jul04 11:42:52 User259876 Session D646.2
\$3.11 0.971 DialUnits File155

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\$32.71 Estimated cost this search
\$33.53 Estimated total session cost 3.140 DialUnits

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